

**BY ORDER OF THE CHIEF,
NATIONAL GUARD BUREAU**

MANPOWER STANDARD 4420RH

1 MARCH 2005



Manpower Standard

CIVIL ENGINEERING (CE) ENVIRONMENTAL

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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OPR: ANG/XPME (Mr. R. Gift)

Certified by: ANG/CS (Col S. Wassermann)

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This Air National Guard Manpower Standard (ANGMS) quantifies the manpower required to accomplish the tasks described in the process oriented description (POD) for varying levels of workload in the Civil Engineering Environmental function whose mission is to provide environmental protection for the location the unit is assigned. This standard is applicable to peacetime operations only. The Air National Guard (ANG) is the authority for the approval and publication of ANG Manpower Standards. Air Force (AF) and ANG directives contain policy and procedural guidance for the operation of the RHS Environmental function. This standard was developed in accordance with AF Instruction (AFI) 38-201, *Determining Manpower Requirements*, and AF Manual (AFMAN) 38-208, Volume 1, *Air Force Management Engineering Program (MEP) - Processes*, and AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*. Send comments and suggested improvements on AF IMT 847, *Recommendation for Change of Publication*, through channels, to ANG, Management Engineering Branch (ANG/XPME/Operating Location TN [OLTN]), 3000 Handly Avenue, McGhee Tyson ANG Base TN 37777-6283.

1. STANDARD DATA.

1.1. Approval Date: 1 March 2005

1.2. Man-hour Data Source. A Staffing Pattern was used to determine the manpower requirement for this function.

1.3. Man-hour Equation. $Y = 1$ (Constant Manpower)

1.4. Points of Contact:

1.4.1. Functional: Col Janice Stritzinger, ANG/CE

1.4.2. Manpower: Mr. Rick Gift, ANG/XPME/OLTN

2. APPLICATION INSTRUCTIONS. This work center requires constant manpower of one authorization. No other application instructions apply.

3. STATEMENT OF CONDITIONS. The normal hours of operation for this function are 80 hours per two-week period. Units work numerous schedules, from the normal 40 hours per week to alternate work schedules ranging from four 10-hour days per week to eight 9-hour days and one 8-hour day per two-week period. There are no other standard of living constraints that impact the daily operation of this work center.

DANIEL JAMES III, Lieutenant General, USAF
Director, Air National Guard

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION***References*

AFI 38-201, *Determining Manpower Requirements*

AFMAN 38-208, Volume 1, *Air Force Management Engineering Program (MEP)-Processes*

AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*

Abbreviations and Acronyms

ACM - Asbestos Containing Building Materials

AF - Air Force

AFSC - Air Force Specialty Codes

ANG - Air National Guard

ANGMS - Air National Guard Manpower Standard

FMB - Financial Management Board

DRMO - Defense Reutilization and Marketing Office

HMP-- Hazardous Material Pharmacy

HW - Hazardous Waste

IMPAC - International Merchant Purchase Authorization Card

MAF - Man-hour Availability Factor

MEP - Management Engineering Program

P2 - Pollution Prevention

PCB - Polychlorinated Biphenyl

POD - Process Oriented Description

RED HORSE - Rapid Engineering Deployment Heavy Operating Repair Squadron Engineering

RHS - RED HORSE Squadron

TDY - Temporary Duty Travel

UMD - Unit Manpower Document

USAF - United States Air Force

UTA - Unit Training Assembly

WLF - Workload Factor

Terms

Air National Guard Manpower Standard (ANGMS). A numbered, specialized publication that quantifies manpower requirements for a work center. Also includes approved variances. See AFI 38-201.

Man-hour. A unit of measuring work. It is equivalent to one person working at a normal pace for 60 minutes, two people working at a normal pace for 30 minutes, or a similar combination of people working at a normal pace for a period of time equal to 60 minutes.

Manpower Standard. The basic tool used to determine the minimum level of manpower required to support a function. It is a quantitative expression that represents a work center's man-hour requirements in response to varying levels of workload.

Staffing Pattern. Constant manpower.

Process Oriented Description. A format that shows work center responsibilities structured for easy measurement of work categories, tasks and subtasks.

Attachment 2

**PROCESS ORIENTED DESCRIPTION
CE ENVIRONMENTAL**

Table A2.1. Listing of Functional Processes.

TASK NO.	PROCESS
1.	ENVIRONMENTAL MANAGEMENT.
1.1.	COORDINATES ENVIRONMENTAL COMPLIANCE ISSUES WITH LOCAL, STATE, AND FEDERAL REGULATOR AND SUPPORT STAFF.
1.2.	COORDINATES WITH INSTALLATION FUNCTION AND HOST STAFF OFFICE (CIVIL ENGINEERING, BASE FIRE DEPARTMENT, READINESS, GROUND SAFETY, BIOENVIRONMENTAL ENGINEERING, ETC.) TO INSURE ENVIRONMENTAL COMPLIANCE IS INCORPORATED INTO POLICIES AND PROJECTS.
1.3.	MEETS WITH ENVIRONMENTAL REGULATOR, NEWS MEDIA REPRESENTATIVE, AND THE GENERAL PUBLIC.
1.4.	PERFORMS LEGAL AND TECHNICAL RESEARCH TO RESOLVE NON-COMPLIANCE ISSUE.
1.5.	COMPILES AND SUBMITS INFORMATION FOR ANG, UNITED STATES AIR FORCE (USAF), AND DOD ENVIRONMENTAL DATA CALL.
1.6.	OPERATES ENVIRONMENTAL PROTECTION COMMITTEE.
2.	ENVIRONMENTAL PLAN.
2.1.	REVIEWS AND UPDATES SPILL PREVENTION AND RESPONSE PLAN.
2.2.	REVIEWS AND UPDATES STORMWATER POLLUTION PREVENTION PLAN.
2.3.	REVIEWS AND UPDATES HAZARDOUS WASTE MANAGEMENT PLAN.
2.4.	REVIEWS AND UPDATES SOLID WASTE MANAGEMENT PLAN.
3.	ENVIRONMENTAL PERMIT.
3.1.	RESEARCHS ENVIRONMENTAL PERMIT.
3.2.	COMPLETES PERMIT APPLICATION AND SUBMITS FOR REGULATORY ACTION.
3.3.	REVIEWS DRAFT PERMIT.

TASK NO.	PROCESS
3.4.	IMPLEMENTS FINAL PERMIT AND ENSURES PERMIT PROVISION IS MAINTAINED.
4.	EMERGENCY RESPONSE.
4.1.	PROVIDES SPILL RESPONSE TRAINING TO SHOP-LEVEL EMPLOYEE.
4.2.	MAINTAINS SPILL RESPONSE MATERIAL.
4.3.	RESPONDS TO SPILL EMERGENCY.
4.4.	MANAGES DISPOSAL OF SPILL MATERIAL.
4.5.	DEVELOPS REMEDIATION PLAN FOR LARGE SPILL AREA.
4.6.	PERFORMS REVIEW AND INSPECTION OF SECONDARY CONTAINMENT PROCEDURE AND EQUIPMENT; PROGRAMS FOR FUNDS AND PROCURES SECONDARY CONTAINMENT SYSTEM.
4.7.	PERFORMS INSPECTION OF TANK AND PIPING SYSTEM.
4.8.	MAKES ANNUAL NOTIFICATION TO LOCAL AND STATE ENVIRONMENTAL AND FIRE OFFICIAL IN ACCORDANCE WITH THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT.
5.	HAZARDOUS WASTE (HW) MANAGEMENT.
5.1.	PROVIDES INITIAL AND REFRESHER HW TRAINING.
5.2.	PERFORMS INSPECTION OF INITIAL HW ACCUMULATION POINT.
5.3.	PERFORMS WEEKLY INSPECTION OF INSTALLATION CENTRAL HW ACCUMULATION POINT.
5.4.	MANAGES HW IN THE CENTRAL ACCUMULATION POINT. Segregates waste, weighs, labels, and maintains waste inventory.
5.5.	SAMPLES AND OBTAINS ANALYSIS OF HW. Completes all shipping document and chain-of-custody form; reviews analytical result for major hazardous constituent.
5.6.	PERFORMS HW DISPOSAL. Programs for disposal funding, generates disposal document, contracts for commercial disposal or Defense Reutilization and Marketing Office (DRMO) disposal, oversees packaging, labeling, and transport of waste, tracks disposal document.
5.7.	MAINTAINS LONG-TERM STORAGE OF DISPOSAL DOCUMENTS.
6.	SOLID WASTE MANAGEMENT.
6.1.	PERFORMS NON-NOTICE INSPECTION OF TRASH RECEPTACLE AND DUMPSTER.

TASK NO.	PROCESS
6.2.	REVIEWS SOLID WASTE DISPOSAL CONTRACT.
6.3.	OVERSEES INSTALLATION RECYCLING PROGRAM. Obtains recycling container for work area and insures recyclable material are collected and transported for proper recovery.
6.4.	CHAIRS THE INSTALLATION RECYCLING COMMITTEE.
7.	AIR PROGRAM.
7.1.	REVIEWS AIR EMISSIONS INVENTORY.
7.2.	REVIEWS DESIGN AND CONSTRUCTION DOCUMENT FOR POTENTIAL REGULATED AIR EMISSION SOURCE, OBTAIN AIR PERMIT TO INSTALL AND PERMIT TO OPERATE.
8.	TOXIC AND HAZARDOUS SUBSTANCE.
8.1.	MANAGES ASBESTOS.
8.1.1.	PERFORMS INSPECTION OF ASBESTOS-CONTAINING BUILDING MATERIALS (ACM).
8.1.2.	IDENTIFIES DAMAGED ACM.
8.1.3.	PROGRAMS FOR REMOVAL OF ACM.
8.1.4.	DEVELOPS PLAN AND SPECIFICATION FOR ABATEMENT OF ACM.
8.1.5.	MANAGES CONTRACT ABATEMENT PROJECT.
8.2.	MANAGES POLYCHLORINATED BIPHENYL (PCB).
8.2.1.	PERFORMS INSPECTION OF POTENTIAL PCB MATERIAL.
8.2.2.	MAINTAINS ANALYTICAL RECORD OF ALL DIELECTRIC MATERIAL IN ELECTRICAL TRANSFORMER.
8.2.3.	SAMPLES AND IDENTIFIES DIELECTRIC MATERIAL IN NEW TRANSFORMER.
9.	PEST MANAGEMENT.
9.1.	REVIEWS PEST MANAGEMENT CONTRACT.
9.2.	INSURES IN-HOUSE PEST MANAGEMENT PROJECT IS COMPLETED IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS.
9.3.	DOCUMENTS PESTICIDE AND HERBICIDE USAGE.
9.4.	DEVELOPS ANNUAL PEST MANAGEMENT PLAN.
10.	ENVIRONMENTAL IMPACT ASSESSMENT PROGRAM.

TASK NO.	PROCESS
10.1	REVIEWS ENGINEERING PROPOSAL AND DESIGN FOR ENVIRONMENTAL COMPLIANCE.
10.2.	REVIEWS WORK ORDER FOR ENVIRONMENTAL COMPLIANCE.
10.3.	COMPLETES AF IMT 813, <i>REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS</i> .
10.4.	MAKES CATEGORICAL EXCLUSION DETERMINATION.
10.5.	PERFORMS ENVIRONMENTAL ASSESSMENT OF MAJOR CONSTRUCTION PROJECT; RESEARCHS PROPOSED ALTERNATIVE AND RECOMMENDS MITIGATION MEASURE; MAKES FINDING OF NO SIGNIFICANT IMPACT.
10.6.	PERFORMS ENVIRONMENTAL BASELINE SURVEY AND SUPPORTING WORK FOR REAL PROPERTY ACTION.
10.7.	EVALUATES AND PUBLISHES PROJECT BOOK DOCUMENT FOR PROGRAMMING (PCB CERTIFICATION, LEAD BASED PAINT, ASBESTOS).
10.8.	EVALUATES FACILITY CONSTRUCTION AND MAINTENANCE ACTIVITY FROM FACILITIES UTILIZATION BOARD MEETING.
10.9.	EVALUATES AND PROVIDES FACILITY SITING RECOMMENDATION FOR BASE MASTER PLAN.
11.	POLLUTION PREVENTION.
11.1.	PERFORMS POLLUTION PREVENTION (P2) OPPORTUNITY ASSESSMENT TO IDENTIFY SOURCE OF POLLUTION AND POSSIBLE MEANS TO MITIGATE.
11.2.	PROGRAMS AND OBTAINS LONG-TERM P2 FUND.
11.3.	PROCURES AND DOCUMENTS CENTRALLY-FUNDED P2 EQUIPMENT.
12.	HAZARDOUS MATERIAL PHARMACY (HMP).
12.1.	CONDUCTS INSTALLATION HMP MEETING.
12.2.	PROGRAMS FOR HMP OPERATING COST.
12.3.	PERFORMS ENVIRONMENTAL REVIEW OF CHEMICAL PRIOR TO ISSUE AND DOCUMENTS REVIEW.
13.	ENVIRONMENTAL FUNDS MANAGEMENT.
13.1.	MANAGES ENVIRONMENTAL FUND.

TASK NO.	PROCESS
13.2.	MANAGES ENVIRONMENTAL INTERNATIONAL MERCHANT PURCHASE AUTHORIZATION CARD (IMPAC) PROGRAM. Approves, documents, and reconciles expenditure; maintains automated AF IMT 9, <i>REQUEST FOR PURCHASE</i> program.
13.3.	PROGRAMS LONG-RANGE FUNDING IN ACES DATABASE; COORDINATES REQUIREMENT WITH ANG/CEV AND FM.
13.4.	DOCUMENTS ENVIRONMENTAL EXPENDITURE IN AUTOMATED ABSS DATABASE.
13.5.	PREPARES DD FORM 1391, <i>MILITARY CONSTRUCTION PROJECT DATA</i> , AND <i>SUPPORTING DOCUMENT FOR ENVIRONMENTAL PROJECT</i> .
13.6.	PLANS, DESIGNS, AND EXECUTES ENVIRONMENTAL PROJECT.
13.7.	PERFORMS CONTRACTING OFFICER REPRESENTATIVE DUTIES FOR ENVIRONMENTAL PROJECT.
14.	ENVIRONMENTAL AUDITING.
14.1.	DOCUMENTS INSTALLATION'S ANNUAL ENVIRONMENTAL, SAFETY, AND OCCUPATIONAL HEALTH COMPLIANCE, ASSESSMENT AND MANAGEMENT PROGRAM AUDIT FINDINGS; DEVELOPS MANAGEMENT ACTION PLAN; PROGRAMS FUNDS FOR CORRECTIVE ACTION; IMPLEMENTS CORRECTIVE ACTION; PROVIDES STATUS REPORT TO SENIOR MANAGEMENT AND ANG/CEV.
14.2	LEADS BASE EFFORT TO IMPLEMENT ENVIRONMENTAL MANAGEMENT SYSTEM
15.	ENVIRONMENTAL TRAINING.
15.1.	CONDUCTS ANNUAL HW MANAGEMENT REFRESHER TRAINING.
15.2.	CONDUCTS ANNUAL HAZARDOUS MATERIAL TRANSPORTATION REFRESHER TRAINING.
15.3.	CONDUCTS ANNUAL HAZARDOUS MATERIAL RESPONSE REFRESHER TRAINING.
15.4.	ATTENDS ANNUAL ANG ENVIRONMENTAL MANAGEMENT CONFERENCE.
16.	RESTORATION.
16.1.	CONSOLIDATES SUSPECTED CONTAMINATION SITES AND PRIORITIZES BASED ON RISK.
16.2.	MANAGES SITE CLOSURE RATE.

TASK NO.	PROCESS
16.3.	PERFORMS ANALYSIS AND SELECTION OF BEST AVAILABLE TECHNOLOGY TO MEET RESTORATION REQUIREMENT.
16.4.	COORDINATES WITH COMMUNITY AND REGULATORY AGENCY.
16.5.	PERFORMS PROJECT MANAGEMENT OF STUDY AND RESTORATION CONTRACT.
17.	CONSERVATION.
17.1.	PRESERVES NATURAL RESOURCES AND EVALUATES IMPACT OF PROPOSED ACTION/PROJECT.
17.2.	PRESERVES CULTURAL RESOURCES AND EVALUATES IMPACT OF PROPOSED ACTION/PROJECT.
17.3.	PERFORMS AND MAINTAINS WETLAND DELINEATION MAP TO PREVENT NEGATIVE IMPACTS FROM PROPOSED ACTION/PROJECT.
18.	BASE NATURAL RESOURCE PROGRAM
18.1.	DEVELOPS INTEGRATED NATURAL RESOURCE MANAGEMENT PLAN.
18.2.	PREVENTS NATURAL RESOURCE DAMAGE FROM BASE ACTIVITY.
18.3.	REVIEWS AND ACTION TO ASSESS IMPACT TO NATURAL RESOURCE PROGRAM AREA AS OUTLINED IN AFI 32-7064, <i>INTEGRATED NATURAL RESOURCES MANAGEMENT</i> .
19.	BASE CULTURAL RESOURCE PROGRAM
19.1.	DEVELOPS BASE CULTURAL RESOURCE SURVEY AND MANAGEMENT PLAN.
19.2.	CONSULTS AND INSURES PRESERVATION OF SIGNIFICANT CULTURAL RESOURCE.
20.	BASE ENCROUCHMENT RISK PROGRAM
20.1.	COORDINATES NOISE STUDY.
20.2.	IMPLEMENTS MITIGATION OF OFF BASE ENCROACHMENT.
20.3.	COORDINATES IMPLEMENTATION OF ENCROACHMENT MODEL.
21.	WATER QUALITY.
21.1.	MANAGES BACKFLOW PREVENTION PROGRAM.
21.2.	COORDINATES WITH BIOENVIRONMENTAL ENGINEER ON WATER QUALITY.
22.	UNIT TRAINING ASSEMBLY (UTA) PREPARATION

TASK NO.	PROCESS
23.	INDIRECT: Indirect work involves those tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are: Administers Civilian, Officer, and Enlisted Personnel; Directs Work Center Activity; Provides Administrative Support; Prepares for and Conducts/Attends Meeting; Administers Training; Manages Supplies; Maintains Equipment; and Performs Cleanup.

Attachment 3**MANPOWER TABLE****Table A3.1. Standard Manpower Table.**

Work Center	Air Force Specialty Title	AFSC	Manpower Requirement							
Civil Engineering Environmental	Civil Engineer	3E5X1	1							
Total			1							

Note. AFSCs may be adjusted at the discretion of the Commander.